

seen to shake and tremble like a bowl of gelatine jelly. This little experiment is easily tried and may be new to some.—C. R. B.

REPORTS UPON THE BOTANICAL COLLECTIONS MADE IN PORTIONS OF NEVADA, UTAH, CALIFORNIA, COLORADO, NEW MEXICO AND ARIZONA, during the years 1871-75. By J. T. Rothrock.—This forms the sixth volume of the Final Reports of the Wheeler Survey and is a work of over 400 pages, containing 30 plates drawn by Isaac Sprague and W. H. Seaman. There are four chapters and an Appendix. Chapter first contains some general notes on Colorado, such as the flora of the open ground, the flora of the mountains, timber and agricultural resources. Chapter second contains notes of the same general nature upon New Mexico, including also some of Arizona. Chapter third contains notes on the Economic Botany of the region included in the report. In this about 35 species are enumerated as being either already in use or worthy of use. Chapter fourth, containing the bulk of the volume, is devoted to the catalogue. In this we have work credited to ten botanists besides Dr. Rothrock himself. To Sereno Watson were entrusted the *Leguminosæ*; to Dr. Englemann the *Cactæ*, *Asclepiadaceæ*, *Gentianæ*, *Cuscutæ*, *Euphorbiaceæ*, *Cupulifera*, *Loranthaceæ*, *Conifera*, *Amaryllidea* and *Juncea*; to Prof. Porter, the *Polemoniaceæ*, *Borragniaceæ*, *Scrophulariaceæ*, *Labiata* and *Polygonaceæ*; to M. S. Bebb, the *Salicaceæ*; to Wm. Boott, the genus *Carex*; to Dr. Vasey, the *Graminæ*; to Prof. Eaton, the *Filices* and *Ophioglossaceæ*; to Thos. P. James, the *Musci*; to Prof. Tuckerman, the *Lichenes*; and to C. F. Austin, the *Hepaticæ*. Credit to whom credit is due is a maxim that has been closely followed in this volume and we are never at a loss to know just whose work we are examining. It is a pity that the scope of the volume had not been extended enough to include all the collections ever made in the region embraced in the report. It would then have been complete as far as it went, and filled another gap in our scattered flora. The Ferns are more elaborately reported upon than any other order, for we have a full report not only of those collected by the Wheeler Surveys, but of all Ferns hitherto discovered in the regions lying west of 105 degrees west longitude and south of 40 degrees north latitude. As many of these ferns are described in works inaccessible to the ordinary botanist, descriptions are given of all not found in Gray's Manual. All this is a very grand thing in itself and botanists will rejoice in having so complete a work upon the ferns of that curious and immense region, but it strikes one as being out of proportion with the rest of the work.

A little inconsistency or uncertainty is also to be noticed in the matter of the nomenclature of orders. We have *Polemoniaceæ* and *Gentianeæ*, *Rutaceæ* and *Cactæ*, *Scrophulariaceæ* and *Scrophularinæ*, etc. In the existing confusion in such names we should have some standard and a work from the hands of such eminent botanists should be consistent with itself. This is not meant as a censorious criticism upon a work meriting so much praise, but as a plea for botanists who, like the writer, are often bewildered in this maze of terminations.—J. M. C.

REVISION OF THE NORTH AMERICAN LILIACEÆ, by Sereno Watson.—Botanists will be delighted at the appearance of this paper, for if any branch of phænogamic botany needs revision it is the Monocotyledons. We have so many works starting out with noble promise, but stopping before the end is reached and hence the Monocotyledons have been neglected. The work now done helps to fill this gap, and botanists should be congratulated that it has fallen into such competent hands. The order *Liliaceæ*, as now accepted, presents such a diversity of characters that it is very difficult to group the genera according to their affinities. The genera have here been grouped in a manner that is entirely new, and, with a few exceptions, it works like a charm. Baccate fruit as distinguished from capsular is considered a subordinate character, and a division into three suborders or series has been made, based upon other characters. The first series is distinguished by "scarious floral bracts, persistent nerved perianth, perigynous stamens with introrse anthers, an undivided persistent style, and a loculicidal fruit (if capsular.) Both of the other divisions have the stamens hypogynous or nearly so, with more or less extrorse anthers, and the floral bracts are more or less foliaceous or are wanting. Both also always have distinct perianth—segments and unjointed pedicels. But one has a nerveless deciduous perianth, the styles (when present) more or less united, and the fruit a loculicidal capsule or berry. The other division has distinct styles and a septicidal capsule conjoined with a persistent nerved perianth." The subdivision into tribes is based on the characters of the inflorescence mainly. The first series contains 9 tribes and 25 genera; the second, 3 tribes and 13 genera; the third, 4 tribes and 12 genera; making in all 16 tribes and 50 genera. In glancing through the paper we made the following notes: *Allium* is the largest genus, containing 46 species, 18 of which are new. For *Hesperoscordium* (?) *maritimum* of Torrey is made a new genus, *Mulla* by name. Wood's *Brevoortia* is